

REMARKS/ARGUMENTS

Section 112 Rejections

The Examiner rejected claims 1-25, 28-37, and 39-45 under 35 U.S.C. § 112 on the grounds that the language “generally free” – language that the previous Examiner suggested that Applicant add to overcome the previous rejection – was indefinite. Applicant both protests and traverses these rejections.

First, Applicant protests this rejection because the Examiner is rejecting language that the previous Examiner suggested, via telephonic interview, be added to the claim. The MPEP advises that “[f]ull faith and credit should be given to the search and action of a previous examiner unless there is a clear error in the previous action or knowledge of other prior art.” MPEP 706.04. “In general, an examiner should not take an entirely new approach or attempt to reorient the point of view of a previous examiner, or make a new search in the mere hope of finding something.” Furthermore, MPEP 707.07(g) states that “[p]iecemeal examination should be avoided as much as possible.” These guidelines serve an important purpose – to promote efficiency and conserve the limited resources of both the Applicant and the Patent and Trademark Office.

Second, Applicant traverses this rejection on the merits. MPEP 2173.05(g) recognizes that “[t]he fact that claim language, including terms of degree, may not be precise, does not automatically render the claim indefinite under 35 U.S.C. § 112, second paragraph. *Seattle Box Co. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818 (Fed. Cir. 1984). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification.” The Examiner argues that the “specification does not provide a standard for ascertaining the requisite degree” and does “not provide for how one determines the existence of the scratches, how one determines which scratch sizes are not acceptable, i.e., which depths at what magnification, and how one determines which scratch sizes are acceptable.”

In fact, the specification is replete with information that would enable a person of ordinary skill to appreciate that a heater tube that is “generally free from random minute scratches” is one that lacks the scratches characteristic of a heater tube polished using conventional industry techniques. The summary of the invention describes the heater tube as being “generally free of the minute scratches resulting from other methods of finishing heater tubes.” Page 8, lines 3-5. Page 5, lines 17-19 elaborates that the industry’s standard method of polishing heater tubes, using an abrasive material suspended in wet lapping, cuts thousands of tiny random scratches into the surface of the heater tube. Although these scratches are typically not visible to the naked eye or with tuberator’s 3-power magnification, they are detectable “under more powerful magnification.” Page 6, lines 8-10. Furthermore, FIG. 1B illustrates, at a microscopic level, the rough, irregular surface finish of a surface marred by random minute scratches. FIGS. 1A and 5, by contrast, illustrate profiles of burnished surfaces that are “generally free of random minute scratches.”

Furthermore, the specification states that the burnished heater tube should be free enough of random scratches to facilitate visual inspection and rating of the fuel degradation product deposits under ASTM's Standard Test Method for Thermal Oxidation Stability of Aviation Turbine Fuels Procedure. See page 1, line 21 – page 3, line 4. The ASTM's own standard "calls for a pretest visual inspection for and rejection of any tube having scratches, dull, or unpolished areas or other defects 'visible to the naked eye.'" Page 3, lines 5-8 (emphasis added); see also page 6, lines 3-7 (stating that "[i]t is common to pre-inspect the tube in the same tubulator used to evaluate the tube after the D3241 test has been performed"). The ASTM's own *visual* pretest inspection standard is no more precise than the claims' "generally free" language. And yet, it is part of a *standard* that persons of ordinary skill in the art routinely carry out.

A person of ordinary skill in the art, educated by the specification, could easily identify a heater tube that had been abrasively polished by observing, under magnification, the characteristic random minute scratches that such polishing produces. Likewise, a person of ordinary skill in the art, applying the ASTM's standard, knows how to distinguish an acceptable heater tube from a reject (one having scratches visible to the naked eye). The rejected claims only cover heater tubes that lack both the characteristic random scratches of an abrasively polished surface and any other random scratches visible to the naked eye.

In view of the specification's teachings, and in further view of the ASTM D3241 context in which heater tubes are used, Applicant respectfully asks the Examiner to withdraw the section 112 rejections.

Section 102(c) rejections

The Examiner rejected claims 48 and 49 under 35 U.S.C. 102(c) on grounds that the invention had been abandoned. Applicant respectfully but vigorously traverses the rejection.

35 U.S.C. 102(c) provides that "[a] person shall be entitled to a patent unless . . . (f) he has abandoned the invention." There are few inter-partes court cases construing 102(c), and even fewer ex-parte cases construing it. Nevertheless, it is well established that when an examiner raises the issue in an ex-parte proceeding, "***every reasonable doubt should be resolved in favor of the inventor.***" *Ex parte Duane*, 20 U.S.P.Q.2d 1479 (Bd. Pat. App. & Inter. 1991) (emphasis added), cited approvingly in MPEP § 2134.

The concept of making "abandonment" a bar to a patent appears to have originated with the centuries-old Supreme Court case of *Pennock v. Dialogue*, 27 U.S. 1 (1829). There, Justice Story wrote:

[A]n inventor may abandon his invention, and surrender or dedicate it to the public. This inchoate right, thus once gone, cannot afterwards be

resumed at his pleasure; for, where gifts are once made to the public in this way, they become absolute. Thus, if a man dedicates a way, or other easement to the public, it is supposed to carry with it a permanent right of user.

Id. at 16. Justice Story further wrote that evidence of an intent to abandon an invention is implied "if [the inventor] suffers the thing invented to go into public use, or to be publicly sold or use, before he makes application for a patent. His voluntary act or acquiescence in the public sale and use is an abandonment of his right; or rather creates a disability to comply with the terms and conditions on which alone the secretary of state is authorized to grant him a patent." *Id.* at 23.

The Examiner's rejection under section 102(c) is in error because (1) there was no complete, reduced-to-practice invention to abandon, (2) David Morris never dedicated or intended to dedicate the knowledge acquired from the unsuccessful experiments to the public; and (3) there is no evidence that David Morris, prior to filing his application, ever suffered the thing invented to go into public use or to be publicly sold or used before he applied for his patent.

First, there was no abandonment of the claimed process or product because David Morris never successfully reduced the claimed invention to practice while he worked at Alcor, now known as the Petroleum Analyzer Company (PAC). *See Corn-Planter Patent*, 90 U.S. 181, 211 (1874) (holding that an unsuccessful experiment, subsequently abandoned, did not anticipate an invention); *Davis Harvester Co. v. Long Mfg. Co.*, 252 F. Supp. 989, 1008-09 (E.D.N.C. 1966) (indicating that 102(c) would only apply to an invention that was conceived and reduced to practice). Page 7, lines 7-9 of the specification recite that "Our efforts at that time were *unsuccessful* in making satisfactorily finished tubes. We abandoned the effort to burnish heater tubes, and *some concluded that it was an impossible or infeasible means to finish heater tubes.*" In short, as of 1989, there was no complete, commercially viable "invention" to abandon. Indeed, as of 1989, David Morris could not have filed a patent application for a method of burnishing heater tubes or for a burnished heater tube, because what he had accomplished at that time lacked any utility, which, under 35 U.S.C. § 101, is a prerequisite to obtaining a patent.

Second, the courts have construed the word "abandonment" in section 102(c) much more narrowly than the term was used on paragraph 22 of David Morris's declaration. MPEP 2134 states that "[t]o abandon the invention" under section 102(c), "the inventor **must intend a dedication to the public.**" MPEP § 2134 (emphasis added); *accord, Marvin Glass & Associates v. Sears, Roebuck & Co.*, 318 F. Supp. 1089, 1102 (S.D. Tex. 1970) ("Abandonment is a deliberate dedication of the invention to the public, either expressly or by necessary implication."); *Piher Sociedad Anonima v. CTS Corp.*, 210 U.S.P.Q. 806 (N.D. Ind. 1981); *CTS Corp. v. Piher International Corp.*, 184 U.S.P.Q. 399 (N.D. Ill. 1975), *aff'd in part, rev'd in part*, 527 F.2d 95 (7th Cir. Ill. 1975). There is no evidence that David Morris ever intended to dedicate knowledge of his failed

attempts to the public. The same might be said of PAC as well – the very fact that PAC asserted (but later compromised) a claim of trade secret misappropriation against Mr. Morris suggests that PAC too never intended to dedicate its knowledge of David Morris's experimental failures to the public.

Third, there is no basis for inferring the requisite intent to abandon the invention. Intent to abandon may be inferred where the inventor suffers a third party to make and use the invention prior to filing his application. Here, there is no evidence that any third parties have ever made use of Applicant's claimed invention. The observation made by one wise court over 100 years ago in another case involving alleged abandonment is equally applicable here:

[S]o long as it was not in public use, and no one else had made and procured a patent for the same discovery, his right to apply for a patent was subject to no restriction. *Even if he had foregotten the invention, or laid it aside as worthless, -- abandoned it, -- he had the right to take it up again, and to proceed as if he had then first made the discovery.*

Western Electric Co. v. Sperry Electric Co., 58 F. 186, 193 (7th Cir. 1893) (emphasis added).

In view of the foregoing arguments, Applicant respectfully requests withdrawal of the section 102(c) rejection.

Section 102(f) rejections

The Examiner rejected claims 1, 4 5, 6, 11, 13, 14, 15, 20, 22-29, 37-40, 42, 45, 46, 48 and 49 under 35 U.S.C. § 102(f) on grounds that the applicant did not invent the claimed subject matter. Applicant respectfully but vigorously traverses the rejection.

35 U.S.C. § 102(f) provides that "[a] person shall be entitled to a patent unless . . . (f) he did not himself invent the subject matter sought to be patented." The Examiner made this rejection on the basis of Applicant's statement, made pursuant to Applicant's duty of candor and disclosure, that the Petroleum Analyzer Company (PAC's) has leveled unproven and unsubstantiated allegations (but not to the Patent and Trademark Office itself) that it owns the subject matter of the claimed invention, and that other unnamed and unidentified Alcor employees are entitled to be listed as co-inventors.

First, the question of *ownership* is irrelevant to section 102(f). The Patent Act issues patents to *inventors*, not *owners*, and only *inventors* can apply for patent protection. *Inventorship* is the starting point for determining *ownership* of patent rights, ***not the other way around***.¹ Whether PAC is the rightful owner of the subject matter of

¹ *University Patents Inc. v. Kligman*, 762 F. Supp. 1212, 1218 (E.D. Pa. 1991). The general rule is that an individual owns the patent rights in the subject matter of which he

David Morris's patent because of Morris's status as an employee in 1989 is irrelevant to the question of patentability.

Furthermore, as shown on the attached declaration of Mr. Charles W. Hanor, the examiner is misconstruing the May 3rd letter. The May 3rd letter was not an admission of Mr. Morris or his attorney. Mr. Lee did not represent Mr. Morris at any time and may have represented his adversary in 2000.

Second, under Patent and Trademark Office Practice, "[t]he party or parties executing an oath or declaration under 37 CFR 1.63 are presumed to be the inventors." MPEP 2137.01. There is no evidence – only a report of a raw, unsubstantiated entirely non-specific allegation, not made directly by PAC to the PTO – to upset that presumption.

The MPEP provides a process, which PAC has so far not elected to use, to establish controverting evidence of inventorship. Specifically, MPEP 1901.02 provides that any member of the public may file a protest that includes "[i]nformation that the applicant . . . 'did not himself invent the subject matter sought to be patented.'" Until and unless PAC avails itself of that provision, the 37 CFR 1.63 presumption of inventorship must stand.

Third, the May 3rd letter attached as Exhibit C to Applicant's IDS does not identify anyone else who allegedly contributed to the burnishing project to an extent justifying their being listed as co-inventors. Neither does that letter state or suggest that David Morris "derived" the burnishing concept from another individual.

Indeed, both David Morris's own declaration and the May 3rd letter establishes that David Morris maintained intellectual domination of the work of *attempting* to make the invention down to the *unsuccessful* testing, selecting, and rejecting of embodiments. David Morris's failure cost him his job. May 3rd letter, at 1. And Alcor, after terminating Morris, made no further attempts to develop the burnishing technique. May 3rd letter, at page 2.

is an inventor even though he conceived of the subject matter or reduced it to practice during the course of employment. *Id.* The fact of employment, standing alone, does not endow an employer with exclusive ownership rights to an invention, even though the invention may occur during working hours. *See Wommack v. Durham Pecan Co.*, 715 F.2d 962, 965 (5th Cir. 1983) ("That an invention was conceived or developed while the inventor was employed by another does not alone give the employer any right in the invention."); *Atlas Brick Co. v. North*, 2 S.W.2d 980, 984 (Tex. Civ. App. – El Paso), *rev'd*, 13 S.W.2d 59 (Tex. Comm'n App. 1929) ("The mere fact that an inventor at the time of his concept is in another's service is not sufficient to give the employer an interest in or title (or right of title) to the invention."); *see also Liggett Group Inc. v. Sunas*, 437 S.E.2d 674, 678 (N.C. App. 1993).

Furthermore, David Morris's declaration establishes his intellectual domination of the work of making the invention successful in 1999, without any assistance from Alcor (now PAC). Whether or not he utilized ideas or materials derived from his experience as an Alcor employee is irrelevant. *See Morse v. Porter*, 155 U.S.P.Q. 280, 283 (Bd. Pat. Inter. 1965) ("In arriving at . . . conception [the inventor] may consider and adopt ideas and materials derived from many sources . . . [such as] a suggestion from an employee, or hired consultant . . . so long as he maintains intellectual domination of the work of making the invention down to the successful testing, selecting or rejecting as he goes . . . even if such suggestion [or material] proves to be the key that unlocks his problem.").

There is simply no evidence, in Applicant's prior submissions or its Information Disclosure Statement, that David Morris derived the invention from another or received sufficient assistance from any other person to merit their being listed as a co-inventor. The MPEP states that "[d]erivation requires *complete* conception by another and communication of that conception by any means to the party charged with derivation prior to any date on which it can be shown that the one charged with derivation possessed knowledge of the invention." MPEP § 2137.

Furthermore, to establish derivation, the "communication of a complete conception *must be sufficient to enable one of ordinary skill in the art to construct and successfully operate the invention.*" *Hedgewick*, 497 F.2d 905, 908 (C.C.P.A. 1974), *quoted with approval*, MPEP § 2137. The May 3, 2000, letter, and David Morris's declaration agree that Morris's Alcor-related efforts to burnish heater tubes *were not viable*. "Apparently, burnishing would extend the length of the tube and would make shoulders or ridges on the tube that the customers did not like." May 3rd letter, at 1. David Morris's inability to construct and successfully operate the claimed invention in 1989 is proof that he neither conceived nor derived from anyone else a complete conception of the claimed invention.

Nothing in any of the materials submitted with Applicant's Information Disclosure Statement establishes a prima facie case of co-inventorship or derivation. In fact, none of those materials (Exhibits A-C) even allege derivation from another or the existence of any co-inventors. On the contrary, the May 3, 2000, letter attached to Exhibit C recites that *David Morris*, not anybody else, came up with the concept of finishing the heater tubes with a process called burnishing.

The Examiner complains that the court did not institute a finding that the applicant was the sole owner and inventor of the invention. Surely, the Examiner does not propose to finally adjudicate that matter himself. Final determination of that matter would certainly require PAC's intervention, as well as depositions, expert witnesses, extensive briefing, and a jury trial to determine the contested fact issues. This is not the best forum to resolve such a dispute.

Applicant respectfully asks that the Examiner withdraw the section 102(f) rejections. The fact that PAC has made an allegation of co-inventorship that is absent

from the record of this application is not a sufficient basis for a rejection under section 102(f), particularly when weighed against David Morris's section 1.63 declaration, Rule 132 declaration, and the absence of any mention of any co-inventor contribution in the May 3, 2000, letter.

Section 103 rejections

The Examiner rejected claims 1-8, 11-17, 20-29, 37-42, and 46-47 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,101,658 to Wilson, III et al. in view of ASTM standard D3241-98, "the Applicant's [allegedly] admitted prior art," and European Patent Application EP 0994394 to Akagi *et al.* Applicant respectfully traverses these rejections.

First, Applicant notes that this rejection covers claims previously stated to be allowable. Furthermore, the primary reference for the rejection is Wilson III et al., a reference that Applicant submitted in an IDS accompanying the application, and a reference that the previous Examiner had fully considered (as evidenced by his checkmark). Likewise, the previous Examiner had knowledge of ASTM D3241, which was extensively discussed in the background section of Applicant's specification.

MPEP 706.04 cautions that "great care should be exercised in authorizing" a rejection of a previously allowed claim. Furthermore, MPEP 707.07(g) states that "[p]iecemeal examination should be avoided as much as possible." Applicant is prejudiced by the inconsistent actions of the Patent and Trademark Office and the added expense of having to respond to serial, piecemeal rejections.

Second, the Examiner erroneously identifies the following as "Applicant's admitted prior art":

- a. Roller burnishing of heater tubes to obtain a highly polished outer substrate was performed during the period 1988-1989.

Office Action, at 7. That which is done in secret and which is not commercialized to the public ***is not prior art.***

Section 103(a) provides that "[a] patent may not be obtained though the invention is not identically disclosed or described as set forth *in section 102 of this title*, if the differences between the subject matter sought to be patented and *the prior art* are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a) (emphasis added). MPEP 2141.01 identifies the "prior art" of section 103(a) as subject matter that constitutes "prior art" under section 102. "A 35 U.S.C. 103 rejection is based on 35 U.S.C. 102(a), 102(b), 102(e), etc., depending on the type of prior art reference used and its publication or issue date." MPEP 2141.01.

David Morris's efforts at Alcor to roller burnish heater tubes in 1989-1990 are not prior art under any provision of section 102. With respect to section 102(a), the Federal Circuit has held that "The statutory language 'known or used by others in this country' means knowledge or use *which is accessible to the public*." *Carella v. Starlight Archery*, 804 F.2d 135, 231 U.S.P.Q. 644 (Fed. Cir. 1986) (emphasis added); *see also* MPEP § 2132. Also, David Morris's efforts were his own, not those of "others" under 35 U.S.C. § 102(a). With respect to section 102(b), Morris's 1988-89 efforts do not constitute a "printed publication" or "public use" or offer for "sale." For reasons set forth earlier in this response, they also do not constitute prior art under section 102(c). And clearly, subsections (d)-(g) do not apply. Because Morris's secret, non-public efforts could not constitute "prior art" under any section of 102, they do not fall within the scope of 103(a) prior art either.

It was improper for the Examiner to consider Morris's 1989-1990 efforts at Alcor as part of the "prior art." *See W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550 (Fed. Cir. 1983) ("[I]t was error to hold that Budd's activity with the Cropper machine, as above indicated, was a 'public' use of the processes claimed in the '566 patent, *that activity having been secret, not public*." (emphasis added). For this reason alone, the Examiner should withdraw the rejection. Applicant's further arguments below are made as if the Examiner did not regard those 1989-1990 efforts as "prior art" to the claimed invention.

Third, the Examiner expresses sincere, but misplaced, concern that "[t]he primary, if not sole, difference between the claimed heater tubes and the known prior art heater tubes is the roller-burnished outer substrate." Office Action, at 8. **That's true.** Measured against the publicly known body of prior art, David Morris was the first person to even attempt to make a burnished heater tube.² Furthermore, David Morris is only the person to successfully develop a process for burnishing a heater tube that is suitable for use with ASTM Standard D3241 (i.e., it lacks visually perceptible scratches that would lead to rejection of the tube under the standard, and thereby "facilitates visual inspection and rating of the fuel degradation product deposits" under that standard,").

This was no trivial accomplishment. David Morris **spent over 12 months** unsuccessfully attempting to develop a burnishing process the decade before as an employee of Alcor. *See* Morris's rule 132 declaration, at ¶ 19. As paragraph 41 of Morris's declaration reports, "My prior efforts during 1989 and initial efforts in 1999 produced (1) an unsatisfactory burnishing 'ring' around the heater tube, and/or (2) tubes with a slightly crushed sidewall resulting in unsatisfactory elongated tubes, until the development of the current invention." *See also* May 3rd letter, at 1 ("**[B]urnishing would extend the length of the tube and would make shoulders or ridges on the tube that the customers did not like.**" Alcor was so discouraged by these failures that it terminated Morris's employment and "shut down any further attempts to develop the

² There is no publicly known evidence that any other person has ever even *attempted* to burnish a heater tube.

burnishing technique.” May 3rd letter, at 2, *accord*, Morris’s rule 132 declaration, at ¶¶ 21-22. Indeed, PAC, which currently has a practical monopoly on the heater tube market, was so alarmed by David Morris’s ultimate 1999 success that it filed a frivolous lawsuit to pre-empt Morris’s competitive threat. *See* Paper # 22, Exhibit “A.”

The Examiner’s argument that “[i]t would have been obvious to one of ordinary skill in the art . . . to modify the teachings of Wilson, III et al. with . . . the teachings of Akagi et al. in order to obtain a heater tube with a highly polished outer substrate by means of roller burnishing” reflects a lack of appreciation of the differences between a “photosensitive drum” and a heater tube and a lack of appreciation of the challenges that Morris had to overcome to successfully burnish a heater tube.

The *Akagi et al.* reference teaches burnishing of a “photosensitive drum of a copying machine, or printer or the like.” A person of ordinary skill in the art would recognize that photosensitive drums for copying machines and the like tend to be much wider than a heater tube.

As noted on page 5, lines 5-12, disposable heater tubes typically have a central portion with an outer diameter of approximately 1/8 inch. They are also hollow. The inner diameter is approximately 1/16 of an inch. That’s not a lot of metal to “work” with. Roller burnishing exerts compressive pressures on a heater tube. As David Morris declared on paragraph 20 of his declaration, “Heater tubes are relatively small and thin and are difficult to cold work without affecting their dimensions.” That’s why David Morris kept running into the problem reported on page 1 of the May 3rd letter: “[B]urnishing would extend the length of the tube and would make shoulders or ridges on the tube that the customers did not like.” Clearly, just because burnishing may have been suitable for a wide photosensitive drum, that did not make burnishing suitable for a thin heater tube.

Furthermore, as Morris reports on paragraphs 31-33 of his declaration (which is consistent with the statements made on page 17 of the specification), the prior art *taught away* from the ultimately successful techniques that David Morris used to burnish a tube:

31. Manufacturer’s literature generally claims that a faster tool rotation speed in burnishing produces superior results.

32. In my own initial numerous experiments to attempt to produce flawless disposable JFTOT heater tubes, little progress was made and little success accomplished.

33. I was not successful *until I ignored what I had been taught and instead substantially lowered the speed of the burnishing tool or machine speed.*

Morris’s rule 132 declaration, at ¶¶ 31-32. This was no obvious task. As Applicant reports on page 17 of the specification, Morris had to “rig[] the burnishing machine to

enable it to operate at slower speeds, which was contrary to the teachings of the prior art." Page 17, line 21 - page 18, line 1 (emphasis added).

Furthermore, photosensitive drums tend to have a uniform width. The width of a heater tube, by contrast, goes from about 3/16 of an inch to about 1/8 of an inch and back to 3/16 of an inch. As a result, burnishing of the central portion "tended to leave tool marks near the shoulders 244 of the heater tube." Page 17, lines 17-18. This was another part of the problem that Morris had to overcome.

In short, the Examiner's reliance on **Akagi et al.** is misplaced. Mere knowledge of burnishing was insufficient to place the claimed subject matter within the grasp of those of ordinary skill in the art. David Morris's accomplishments were the result of perseverance, ingenuity, and an unwillingness to accept failure. He earned the right to a patent. He should be given his due.

Fourth, the Examiner did not follow Office procedure with respect to David Morris's rule 132 affidavit. MPEP 716.02 provides:

Affidavits or declarations containing evidence of criticality or unexpected results, commercial success, long-felt but unsolved needs, failure of others, skepticism of experts, etc., **must be considered** by the examiner in determining the issue of obviousness of claims for patentability under 35 U.S.C. 103.

MPEP 716.01(a) (emphasis added). Furthermore, in evaluating the affidavit, the Examiner should not simply take the position of a skeptic or an adverse party. Rather, the Examiner should give "due consideration to the persuasiveness of any arguments and any secondary evidence." MPEP 716.01(d). "If, after [fairly] evaluating the evidence, the examiner is still not convinced that the claimed invention is patentable, the next Office action should include a statement to that effect and identify the reason(s)" *Id.*; see also MPEP § 716.01 ("Where the evidence is insufficient to overcome the rejection, the examiner must specifically explain why the evidence is insufficient.").

Applicant justifiably has the sense that it is not receiving a "fair shake." Patent prosecution, at least at a pre-appeal stage, should not be an adversarial proceeding. Applicant respectfully asks that due and fair consideration be given to the arguments made.

Applicant's claims are of reasonable scope. PAC has, for over 30 years, dominated the heater tube market with tubes polished by an abrasive polishing process. Applicant only claims that which he alone successfully reduced to practice. Giving Applicant his rightful exclusivity on burnished heater tubes will not stop PAC, or anyone else, from continuing to sell its abrasively polished heater tubes. On the contrary, Morris's entry in the market will likely benefit consumers and lower prices by loosening PAC's monopoly grip on the market.

Other Section 103 rejections

The Examiner also rejected claims 9-10 and 18-19 over the same references noted above, and further in view of U.S. Patent No. 5,733,178 to Ohishi. Applicant traverses those rejections for the same reasons expressed above, and further because Ohishi, which is directed to texturing magnetic recording media substrates, is not analogous art. There is no motivation, teaching, or suggestion to combine Ohishi with the other references for something as dull and mundane as a resistively heated heater tube. It is well established that "a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential evidentiary component of an obviousness holding.'" ³ Moreover, "[t]his showing must be clear and particular" ⁴ "The mere fact that references can be combined or modified does not render the resultant combination obvious unless *the prior art* also suggests the desirability of the combination." ⁵

The Examiner also rejected claims 30-33 over the same references noted above, and further in view of U.S. Patent No. 5,540,883 to Jones and "Burnishing Products" by Elliott Tool Technologies. Applicant traverses those rejections for the same reasons expressed above, and further because Jones, which is directed to producing bearing surfaces from powder metal articles, is not analogous art. There is no motivation, teaching, or suggestion to combine Jones with the other references to polish a heater tube.

The "Elliott Tool Technologies" reference ***actually confirms the statements made on paragraph 31 of Morris's declaration***. For a hole size of 0.125 inches (i.e., for an 1/8" wide heater tube section), it teaches a speed of 1500 rpm. Far from hurting Morris's position, this reference *supports* Morris's arguments that the prior art taught speeds that were unsuitable for ASTM testing because such speeds elongated the tubes and left unsightly ridges near the shoulders of the tubes.

The Examiner also rejected claims 34-36 on the combination of above references plus additional references. Applicant traverses these rejections for the same reasons expressed with respect to claims 30-33. Furthermore, the Examiner's rejections "presuppos[e] that the person of ordinary skill would necessarily pick and choose among the multitude of disclosures to combine them exactly as did the inventor[s]." ⁶ The Federal Circuit has refused invitations to "pick and choose individual elements from **three** prior art patents and thereby re-create the invention." ⁷ Here, the Examiner picks

³ *Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000).

⁴ *Id.*

⁵ M.P.E.P. § 2143.01 (citing *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990)) (emphasis added).

⁶ *Henkel Corp. v. Coral Inc.*, 21 U.S.P.Q.2d 1081, 1107 (N.D. Ill. 1990).

⁷ *Polaroid Corp. v. Eastman Kodak Co.*, 789 F.2d 1556, 1571 (Fed. Cir. 1986) (emphasis added).

and chooses from as many as *eight* references. Unless there is a clear and particular motivation, teaching, or suggestion, to combine all of those references together exactly as did the inventors, it is improper to "string together a series of references, which collectively contain the elements of an apparatus" to render the claims of a patent obvious.⁸

The Examiner also rejects claims 43 and 44 on a combination of references, together with the unsubstantiated assertion that "it is known to use a burnished tube to test for the formation of deposits of fuel." Applicant traverses these rejections for the same reasons expressed with respect to claims 40-42, and further because *it is not true* that "it [was publicly] known [at the time of invention] to use a **burnished** tube to test for the formation of deposits of fuel."

In view of the foregoing arguments, Applicant respectfully requests the Examiner to withdraw the rejection and pass the claims to issue.

Objections to the Drawings

The Examiner also objected to the drawings, asserting that Figures 2 and 3 should be designed by a legend as prior art. Applicant respectfully traverses and asks for withdrawal of this requirement, because Figures 2 and 3, as described in the specification, illustrate elements and aspects of the claimed invention. For example, Figure 2 illustrates the disposable coupon of claim 47. Figures 1B and 5 illustrate examples of burnished surfaces, which is also an element of claim 47. Likewise, Figure 3 illustrates an element of claim 30 (namely, "providing a burnishing machine . . .").

Furthermore, the specification describes certain aspects of Figures 2 and 3 (the heater tube) that the Examiner has not demonstrated to be a part of the prior art. For example, the specification states that "in the exemplary embodiment, the shoulder radii 248 and 252 are approximately 0.015 inches." Page 11, lines 15-16 (describing Figure 2). Furthermore, although burnishing machines are old, the Examiner has not demonstrated that every element of (including adaptations to) the burnishing machine 300 are in the prior art.

⁸ *Sibia Neurosciences Inc. v. Cadus Pharmaceutical Corp.*, 55 U.S.P.Q.2d 1927, 1934 (Fed. Cir. 2000); *see also In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988) ("One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."); *Grain Processing Corp. v. American Maize-Products Co.*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988) ("Care must be taken to avoid hindsight reconstruction by using 'the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.'") (internal citation omitted).

Reference numerals 240 and 390 have been deleted from the amended drawings, attached.

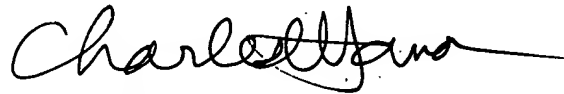
Objections to the Specification

The Examiner objected to certain informalities in the specification. Appropriate correction has been made.

Conclusion

In view of the foregoing amendments and arguments, Applicants respectfully ask that the rejections and objections be withdrawn. Believing that all things raised in the Examiner's October 23, 2003, Office Action have been addressed, the undersigned respectfully requests that the application be allowed and passed to issue.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Charles W. Hanor", with a long horizontal flourish extending to the right.

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